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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,212	02/17/2004	ANDRE YU	11987-US-PA	2211

31561 7590 05/26/2005

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE  
7 FLOOR-1, NO. 100  
ROOSEVELT ROAD, SECTION 2  
TAIPEI, 100  
TAIWAN

EXAMINER
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VO, TUYET THI

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/708,212

Applicant(s)

YU ET AL.

Examiner

Tuyet Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the phase of the illumination control pulse signal varies within a predetermined range as required in the claim language. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "signals can be varied" in claim 3 renders the claim indefinite due to its uncertain behavior of the signal. It is not definitely be varied only.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the frequency of the illumination control pulse signal varies within a predetermined range, does not reasonably provide enablement for the phase of the illumination control pulse signal varies within a predetermined range. What concept does that provide/illustrate the phase of illumination control pulse signal being changed/varied within a predetermined range?

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Usami (US Pat. 6,057,651).

Usami discloses a pulse width modulation (PWM) illumination control circuit for controlling the illumination of light emitting diodes, comprising:

an illumination control pulse-generating unit (44), for receiving an illumination-adjusting signal (P3) and generating an illumination control pulse signal (P5) according to the illumination-adjusting signal (P3), wherein a duty cycle of the illumination control pulse signal varies within a predetermined range via the different value of resistors R1, R2; and

a DC/DC converter (36, 38, 39), coupled to the illumination control light-emitting control pulse signal pulse-generating unit (44) for driving the diodes (42) according to the illumination control pulse signal (P5).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. (US Pub. 2003/0151601), hereinafter Chung.

Regarding claims 4 and 5, Chung discloses a pulse width modulation (PWM) illumination control circuit (Fig. 6) for controlling the illumination of light emitting device, comprising:

an illumination control pulse-generating unit (8), (one type of microcontroller/microprocessor as refer) for receiving an illumination-adjusting signal from a time controller (10) and generating an illumination control pulse signal according

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to the illumination-adjusting signal from the controller (10), wherein a frequency of the illumination control pulse signal varies within a predetermined (Abstract); and

an inverter (4), coupled to the illumination control light-emitting control pulse signal pulse-generating unit (8) for driving the illuminating device (6) according to the illumination control pulse signal from the PWM controller (8).

However, Chung does not disclose a DC/DC converter for driving a light emitting diodes.

Usami discloses a PWM control circuit utilizing a DC/DC converter to drive light emitting diodes.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize DC/DC for driving LEDs as taught by Usami into the Chung lighting system in order to expand to different types of light source as long as it suited/compatible to the modulation illumination control circuit.

Regarding claim 6, Chung discloses substantially the claim invention as noted above except for comprising a phase of the illumination of control pulse signal varies within a predetermined range.

It would have been an obvious matter of design choice to utilize a PWM circuit that generates/outputs a control signal with a vary frequency, phase or duty cycle in order to control as well as to provide a proper output signal applied to a lighting system. Such implementation is considered as a routine skill in the art.

### ***Allowable Subject Matter***

11. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Commenting on claim 3 is not provided in this action due to its rejection as noted above.

12. The following is a statement of reasons for the indication of allowable subject matter: the prior fails to the illumination control pulse-generating unit further comprises a noise generator, for generating an analogue adder, coupled to the noise generator for a noise signal, receiving the illumination-adjusting signal and the noise signal to produce a

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noise adjusting signal, and signal loaded illumination and a comparator, coupled to the analogue adder for comparing the noise signal loaded illumination adjusting signal with a triangle wave as required in claim 2.

***Citation of pertinent prior art***

13. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Toyama (US Pub. 2003/0030385) discloses AC power generating apparatus having electronic capacitor and ceramic capacitor.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyet Vo whose telephone number is 571 272 1830. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571 272 1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Tuyet Vo

Primary Examiner

May 16, 2005